# 2003 Update WSDOT Cost Estimate Validation Process (CEVP ™)

#### **SR 167 AND HOV PROJECT**

**Project Status:** Pre-EIS scoping and initial traffic analysis was completed, and preferred long range vision for corridor was identified. In 2005-07, \$9.6 million is available in the Nickel Package to begin environmental review.

CEVP:	2003 90% ile	2002 90% ile	Change
<b>2-lanes</b> – Adds the equivalent of two lanes (potentially managed) in each direction from SW 43rd to the King/Pierce County line.	\$1.5 B	N/A	N/A
<b>1-lane</b> – Adds one lane (potentially managed) in each direction from SW 43rd to the King/Pierce County line.	\$1.27 B	N/A	N/A

**Key Differences:** In 2002, the project did not go through CEVP. Corridor analysis was conducted in 2003. Previous RTID estimate was not inflated to the year of construction.

## **WSDOT** Takes a Leadership Role in Cost Estimating Improvements

WSDOT's work to develop and publish cost estimates based upon risk analysis has been recognized in at least two recent national reports. <sup>2</sup> These reports have suggested that CEVP™ or a process like it should be more widely used to develop cost estimates for large, complex infrastructure projects.

The initial CEVP results were released June 3<sup>rd</sup> 2002 and earned WSDOT credit for providing "...an unprecedented public service ...a much-needed dose of fiscal reality... the Department offered realistic cost-range estimates" (Seattle Post-Intelligencer, June 9, 2002)

WSDOT's commitment to accurate cost estimates is part of our on-going commitment to gain public trust and demonstrate accountability. For more information, go to: http://www.wsdot.wa.gov/

0308-0215

### **Background**

In January 2002, WSDOT began a new process to improve upon its cost estimation procedures for complex transportation projects. The process, called the "Cost Estimate Validation Process" (CEVP™), provides a means, starting early in the project development cycle, to identify, assess and evaluate the risks and opportunities that may effect project cost or schedule. WSDOT is committed to ongoing attention to cost evaluation as a means to better manage projects and to provide information to decision-makers and the public. The 2003 CEVP Update is the first annual update.

Material in this brochure is tailored to RTID needs. First, scopes match RTID project definitions as included on the December 2002 draft King County project list.

Second, costs are reported at the 90<sup>th</sup> percentile level. Simply put, the 90<sup>th</sup> percentile means that there is a 90% certainty that the final price tag will be at or below the stated number. The 90<sup>th</sup> percentile helps communicate project risk to the public, and helps avoid the perception that price tags are "low-balled" in order to win public acceptance.

#### What's New in 2003?

A CEVP™ update has been performed to assure projects are aligned with the Legislature's 2003 Transportation Funding Plan (the "nickel package") and the current financial plans being considered by the Regional Transportation Investment District (RTID). It appears that the "high water" RTID funding levels would top out around \$14 billion for projects in King, Snohomish and Pierce Counties.

WSDOT has focused its 2003 CEVP™ review efforts on the major projects in King County, where the largest problems are expected to be encountered in matching the states biggest transportation needs to available funding.

- 1. SR 99 Alaskan Way Viaduct and Seawall Project, Seattle
- 2. SR 520 Bridge Replacement and HOV Project
- 3. I-405 Congestion Relief and Bus Rapid Transit Projects King County
- 4. SR 509/I-5 Freight and Congestion Relief Project, South King County
- 5. I-90 Two-Way Transit and HOV (first-time CEVP™ review)
- 6. SR 167 (first-time CEVP™ review)

The results of the 2003 CVEP™ review are summarized inside this packet.



<sup>&</sup>lt;sup>2</sup> "Best Practices and Guidelines for Project Cost Estimating", National Cooperative Highway Research Program, *A Synthesis of Highway Practice;* Schexnayder, C; Firoi, C & Weber, S; July 2003 review copy.

<sup>&</sup>quot;Completing the 'Big Dig': Managing the Final Stages of Boston's Central Artery/Tunnel Project", Committee for Review of Project Management Practices, National Research Council, February 2003.

# 2003 CEVP™ UPDATE

# Communications specifically prepared for RTID as of August 14th, 2003

#### **ALASKAN WAY VIADUCT & SEAWALL REPLACEMENT PROJECT**

**Project Status:** Draft Environmental Impact Statement to be completed by April 2004, with final approval expected in Spring 2005. \$177 million included in the 2003 Legislative Transportation Funding package (the "Nickel Plan") provides for the EIS analysis, significant design and right of way purchases. If funding is available, construction could begin as soon as 2008.

CEVP:	2003 90% ile	2002 90% ile	Change
Rebuild – Rebuilds existing viaduct and seawall.	\$3.5 B	\$3.5 B	\$0 B
Aerial – Replaces viaduct with new, wider viaduct and rebuilds seawall.	\$3.5 B	\$6.4 B	\$2.9 B
Tunnel – Replaces viaduct and seawall with a six-lane tunnel on central waterfront	\$4.1 B	\$11.6 B	\$7.5 B
Bypass Tunnel – Replaces viaduct and seawall with a four-lane tunnel on central waterfront and expands Alaskan Way to six lanes.	\$3.4 B	New Option, N/A	New Option, N/A
Surface - Replaces viaduct with a six to eight lane Alaskan Way. Rebuilds seawall.	\$2.8 B	New Option, N/A	New Option, N/A

Key Differences: Project limits are now primarily from Holgate Street through Battery Street Tunnel.

#### SR 509 - I-5 FREIGHT CORRIDOR & CONGESTION RELIEF

**Project Status:** The Environmental Impact Statement was approved in March 2003. \$35 million was included in the 2003 Legislative Transportation Funding package (the "Nickel Plan") for continued design, permits and right of way acquisition. If funding is available, construction could begin as soon as 2006.

CEVP:	2003 90% ile	2002 90% ile	Change
SeaTac to Federal Way – Completes SR 509 as a six-lane freeway and adds six miles of new lanes to 1-5 from Federal Way to SeaTac	\$987 M	\$1.02 B	\$33 M

Key Differences: No significant change.

#### I-405 CONGESTION RELIEF & BUS RAPID TRANSIT PROJECT

**Project Status:** Corridor Record of Decision and selected alternative were finalized in October 2002. \$485 million included in the 2003 Legislative Transportation Funding package (the "Nickel Plan") provides three congestion relief projects. The first project will be open to traffic 2010. Footprint designs and environmental clearances for this project will jump-start the next project phase. If funding is available, construction could begin as soon as 2008.

CEVP:	2003 90% ile	2002 90% ile	Change
Renton, Bellevue, and Kirkland Improvements – I-405/West Valley Highway to Maple Valley Highway, I-405/SE 8 <sup>th</sup> to I-90, and I-405/SR 520 to SR 522.	\$493 M	New Option, N/A	New Option, N/A
<b>Tukwila to Bothell</b> – Multi-modal corridor improvement projects from I-5 in Tukwila to SR 522 in Bothell. (Scope enhancements total \$400 million)	\$4.7 B/\$5.1 B	\$4.2 B	\$0.5 B

**Key Differences:** The Renton, Bellevue, and Kirkland improvement projects are new since 2002. Tukwila to Bothell projects/scopes continue to be evaluated as funding packages are developed with federal, state and regional funding options. Costs of mitigating stormwater runoff have increased.

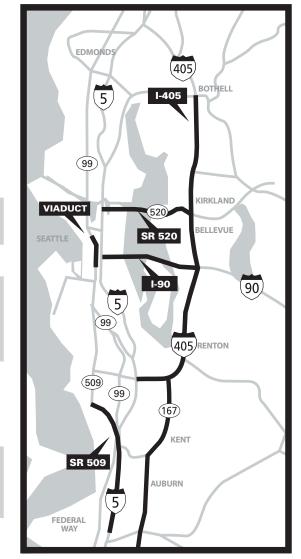
## Notes

GP / General Purpose Lane HOV / High Occupancy Vehicle Lane HCT / High Capacity Transit Lane

#### SR 520 BRIDGE REPLACEMENT AND HOV PROJECT

**Project Status:** Draft Environmental Impact Statement is expected in Summer 2005, with final approval by Summer 2006. \$56.5 million included in the 2003 Legislative Transportation Funding package (the "Nickel Plan") provides for the EIS analysis, significant design and early right of way purchases. Highest priority is to replace aging and vulnerable Evergreen Point Floating Bridge. If funding is available, construction could begin as soon as 2008.

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CEVP:	2003 90% ile	2002 90% ile	Change
<b>4-lane</b> – Rebuilds existing facility.	\$1.8 B	\$2.1 B	\$0.3 B
4-lane w/ accommodation of HCT – Rebuilds existing facility with accommodations for future high capacity transit across Lake Washington.	\$1.9 B	New Option, N/A	New Option, N/A
<b>6-lane</b> – Expands existing facility by adding one HOV lane in each direction and accommodates for future HCT. (Scope enhancements total \$500 Million)	\$2.0 B/\$2.5 B	\$5.9 B	\$3.4 B
8-lane – Expands existing facility by adding one HOV and one GP lane in each direction and accommodates for future HCT.	*TBD		



**Key Differences:** Project limits changed to east of I-5 to west of I-405. \*8-lane option needs further analysis and engineering before full CEVP.

#### I-90 TWO-WAY TRANSIT AND HOV

**Project Status:** In this document, R-8A (below) was picked as the "preferred alternative". Draft Environmental Impact statement was published in April 2003, with final approval expected by March 2004. Sound Transit provides \$17 million for EIS analysis and design. \$15 million included in the 2003 Legislative Transportation Funding package (the "Nickel Plan") provides remaining design work and contributes to construction. If funding is available, construction could begin as soon as 2005.

CEVP:	2003 90% ile	2002 90% ile	Change
<b>R-2B</b> – Converts center roadway to a two-way facility for transit and HOV carpools. Mercer Island SOV traffic moves to outer roadways.	\$ 49 M	N/A	N/A
<b>R-5 Restripe</b> – Provides transit only use of outer roadway shoulders in peak-periods, EB in the morning and WB in the evening, through restriping of existing roadway.	\$ 21 M	N/A	N/A
<b>R-5 Modified</b> – Provides transit only use of outer roadway shoulders in peak periods, EB in the morning and WB in the evening, through restriping of existing roadway. Also includes additional widening where possible.	\$93 M	N/A	N/A
R-8A – Adds an HOV lane in each direction to the outer roadways, by narrowing roadway lanes and shoulders, or widening where possible.	\$128 M	N/A	N/A